

## **DETAILED ACTION**

### ***Response to Amendment***

1. This Office action addresses claims 21-26 and 28-41. Applicant's amendments are sufficient to obviate the rejections under 35 USC 103; however, the claims remain rejected under 35 USC 112, first paragraph for reasons already of record, and are also subject to new grounds of rejection under 35 USC 112 first paragraph, as necessitated by amendment. Accordingly, this action is made final.

### ***Specification***

2. The amendment filed June 23, 2009 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: Please see section #4 below, "Response to Arguments," for a complete explanation.

### ***Claim Rejections - 35 USC § 112***

3. Claims 21-26 and 28-41 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the

claimed invention. Independent claims 21, 28, 32, and 38 were each previously amended to recite a combination comprising either a serpentine or interdigitated flow field, and a plurality of projections on a rib or a projection on a rib that continuously changes. It is submitted that the originally-filed application does not support this subject matter in the manner required by 35 USC 112, first paragraph. The instant specification discloses numerous embodiments of the invention. The embodiments of Figs. 7-9 have a serpentine flow channel; the embodiments of Figs. 10 and 11 have interdigitated flow channels; the embodiments of Figs. 13-14 have a plurality of projections differing in height and/or width on a rib; and the embodiments of Figs. 15 and 16 have a continuously changing projection on a rib. There is no disclosure or suggestion in the specification that the different features of the various embodiments are combinable or usable together, as now recited in the present claims. It should be noted that the embodiments disclosing the plurality of projections, or a continuously changing projection, appear to be only directed to flow field plates having straight, parallel flow channels. There is no suggestion or contemplation that the characteristics of these projections are usable in the serpentine and interdigitated embodiments of Figs. 7-11. Likewise, there is no indication in the description of Figs. 7-11 that a continuously changing projection and/or a plurality of projections having different height and/or widths can be used on any portion of a single rib. Accordingly, because the now-claimed subject matter was not envisaged and conveyed in such a way as to make clear that Applicants considered that subject matter to be the invention, it is believed that the originally-filed application as a whole fails to provide adequate written description for the claims.

Regarding the amendment filed on June 23, 2009, this amendment is considered to introduce additional new matter with respect to claims 32 and 38. These claims have been amended to recite that “the projections have a length substantially equal to a sum of a width of the straight flow path segment and widths of ribs defining the straight flow path segment on both sides thereof.” There does not appear to be adequate support for this limitation in Figures 10 and 11 of the originally-filed application. In these figures, the projections (57) have a length that appears to be **less than** the sum of the widths of the straight flow path segment and widths of ribs (45) defining the straight flow path segment on both sides thereof, in contradiction to the claim language. Accordingly, there is not believed to be adequate support for the language as recited in claims 32 and 38.

*Response to Arguments*

4. Applicant’s arguments filed June 23, 2009 have been fully considered but they are not persuasive insofar as they apply to the present rejections. Regarding the filing of the translation of the priority document and the amendment of the specification to incorporate the subject matter of that document, these actions are not yet believed to be sufficient to obviate the rejection under 35 USC 112, first paragraph. Pursuant to 37 CFR 1.55, if an English language translation is required by the Examiner, “it must be filed together with a statement that the translation of the certified copy is accurate.” Since it does not appear that Applicant has stated on the record that the translation is accurate, the incorporation of the subject matter from that translation cannot be properly acknowledged. If Applicant were to file such a statement, the amendments to the

claims and specification would be deemed acceptable, with the exception of the following: as set forth in the second paragraph of the 35 USC 112 first paragraph rejection above, the amendatory language of claims 32 and 38 reciting "substantially equal" lengths is considered to constitute new matter even if the subject matter from the priority document were properly incorporated by reference. This is because neither the originally-filed specification nor the priority document appears to support this language. The same rationale applies to the amendment to the specification; this language appears in the last and second-to-last full paragraphs of the amendment. Deletion or correction of this language in the specification amendment and in claims 32 and 38 is required; however Applicant is advised that entry of any amendment after final rejection is not a matter of right unless it is deemed to immediately place the application in condition for allowance.

***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (571) 272-1299. The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Basia Ridley, can be reached at (571) 272-1453. The phone number for the organization where this application or proceeding is assigned is (571) 272-1700. Documents may be faxed to the central fax server at (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jonathan Crepeau/  
Primary Examiner, Art Unit 1795  
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